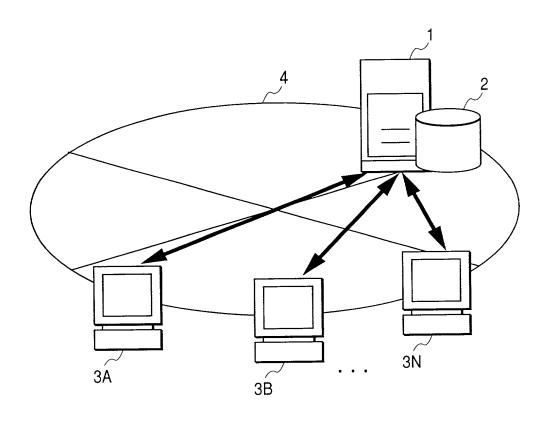
FIG. 1



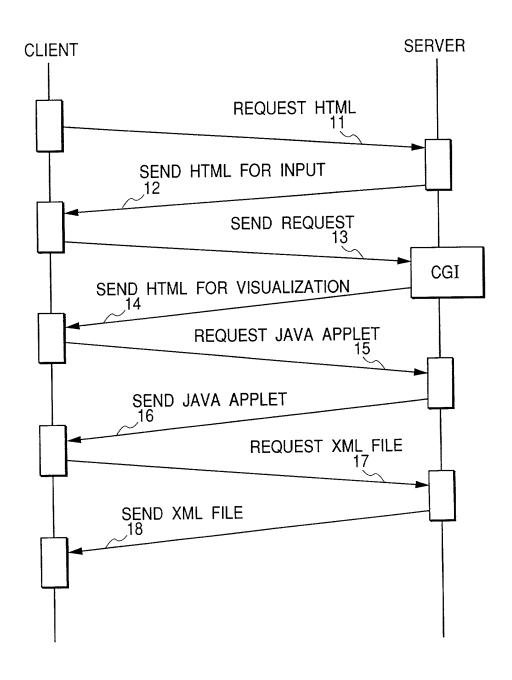
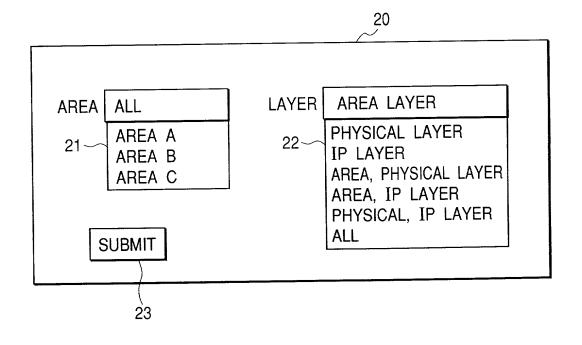


FIG. 3



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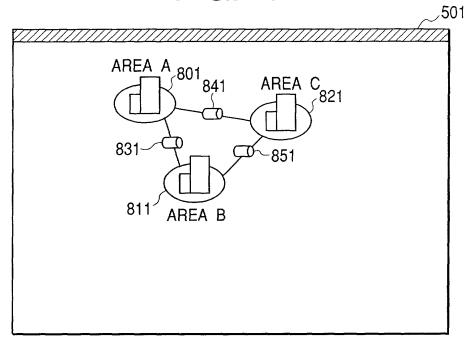


FIG. 5

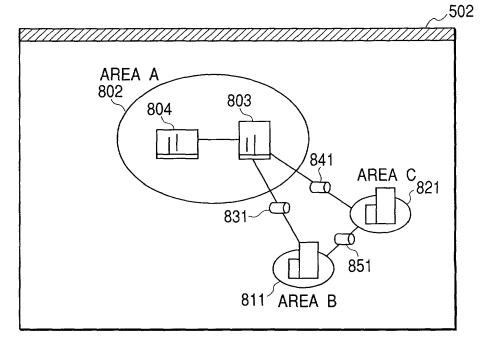


FIG. 6

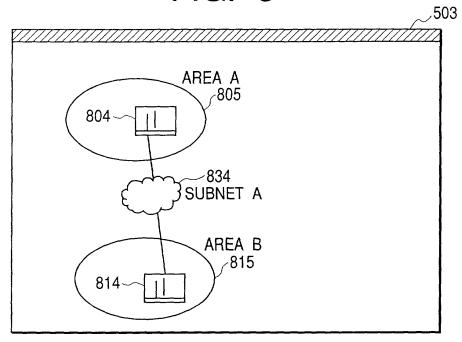


FIG. 7

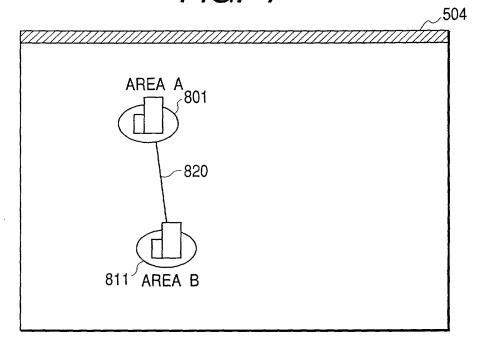
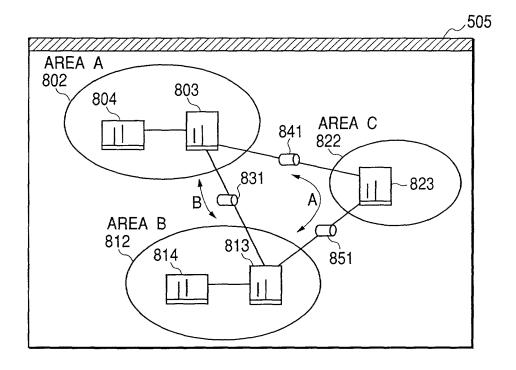


FIG. 8



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FIG. 9

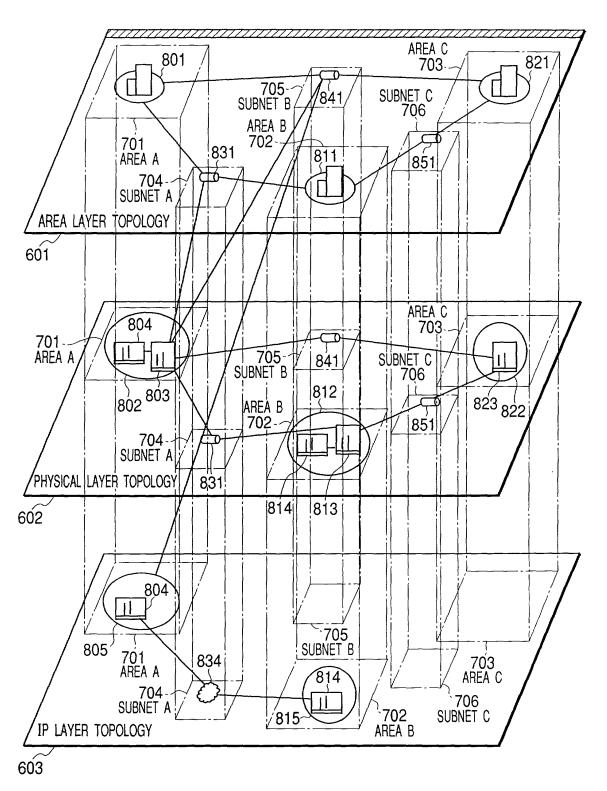


FIG. 10

```
⟨equip name="router804"⟩
1
         \langle position x = "20" y = "50" w = "40" h = "20" / \rangle
2
         (icon url="http://foo/router.gif"/)
3
        </ri>⟨∠equip⟩
4
        ⟨equip name="atm-sw803"⟩
5
         \langle position x="30" y="10" w="20" h="30"/\rangle
6
          (icon url="http://foo/atm-sw.gif"/)
7
8
        //equip>
        ⟨equip name="router814"⟩
9
          \langle position x="20" y="50" w="40" h="20"/\rangle
10
          (icon url="http://foo/router.gif"/)
11
         </e>
⟨ / equip⟩
12
        ⟨equip name="atm-sw813"⟩
13
          \langle position x="30" y="10" w="20" h="30"/\rangle
14
          (icon url="http://foo/atm-sw.gif"/)
15
16
         //equip>
         ⟨equip name="atm-sw823"⟩
17
           \langle position x="30" y="10" w="20" h="30"/ \rangle
18
           (icon url="http://foo/atm-sw.gif"/)
19
20
         //equip>
         ⟨location name="A-relay801"⟩
21
           \langle position x = "5" y = "5" w = "20" h = "20" / \rangle
22
           (icon url="http://foo/relay.gif"/)
 23
          ⟨ ∕location⟩
 24
           ⟨location name="A-relay802"⟩
 25
           \langle position x="0" y="0" w="100" h="100"/\rangle
 26
            (icon url="http://foo/relay.2.gif"/)
 27
          ⟨ ∕ location⟩
 28
          ⟨location name="A-relay805"⟩
 29
            \langle position x="0" y="0" w="60" h="50"/ \rangle
 30
            (icon url="http://foo/relay.3.gif"/)
 31
          ⟨ ∕ location⟩
  32
```

FIG. 11

```
33
        (location name="B-relay811")
34
          \langle position x="0" y="0" w="20" h="20"/ \rangle
35
          (icon url="http://foo/relay.gif"/)
36
        ⟨ / location⟩
37
        (location name="B-relay812")
38
          \langle position x="0" y="0" w="100" h="100"/ \rangle
39
          (icon url="http://foo/relay.2.gif"/)
        ⟨ ∕ location⟩
40
41
        (location name="B-relay815")
          \langle position x="0" y="0" w="100" h="100"/\rangle
42
43
          (icon url="http://foo/relay.3.gif"/)
44
        (/location)
45
        (location name="C-relay821")
46
          \langle position x="0" v="0" w="20" h="20"/\rangle
47
          (icon url="http://foo/relay.gif"/)
48
        //location>
49
        (location name="C-relay822")
          \langle position x="0" y="0" w="30" h="30" / \rangle
50
51
          (icon url="http://foo/relay.4.gif"/)
52
        //location>
53
        (net name="netA831")
54
          \langle position x="0" y="0" w="10" h="10"/ \rangle
55
          (icon type="http://foo/physicalNet.gif"/)
56
        //net>
57
        (net name="netA834")
58
          \langle position x="0" v="0" w="10" h="10"/\rangle
59
          ⟨icon type="http://foo/logicalNet.gif"/⟩
60
        //net>
61
        (net name="netB841")
          \langle position x="0" y="0" w="10" h="10"/\rangle
62
63
          (icon type="http://foo/physicalNet.gif"/)
64
        //net>
65
        (net name="netC851")
66
          \langle position x="0" y="0" w="10" h="10"/ \rangle
67
          (icon type="http://foo/physicalNet.gif"/)
68
        //net>
```

FIG. 12

```
⟨LOVD name="A-relay-LOVD" x="10" y="10"⟩
1
        \langle level num="1" w="30" h="30" \rangle
2
          ⟨obj name="A-relay801"/⟩
3
4
         </level>
        \langle level num="2" w="100" h="100" \rangle
5
          ⟨obj name="A-relay802"/⟩
6
          ⟨obj name="router804"/⟩
7
          ⟨obj name="atm-sw803"/⟩
8
9
         </level>
         \langle level num="3" w="60" h="50" \rangle
10
          ⟨obj name="A-relay805"/⟩
11
          ⟨obj name="router804"/⟩
12
         </le>
⟨ / level ⟩
13
       </LOVD>
14
       \langle LOVD name="B-relay-LOVD" x="20" y="70" \rangle
15
         \(\text{level num="1" w="30" h="30"}\)
16
          ⟨obj name="B-relay811"/⟩
17
         ✓ level
18
         \langle level num="2" w="100" h="100" \rangle
19
           (obj name="B-relay812"/)
20
           ⟨obj name="router814"/⟩
21
           ⟨obj name="atm-sw813"/⟩
22
          ✓ level
23
         (level num="3" w="60" h="50")
24
           ⟨obj name="B-relay815"/⟩
25
           ⟨obj name="router814"/⟩
26
27
          ✓ level
        </LOVD>
28
        \langle LOVD name = "C-relay-LOVD" x = "70" y = "20" \rangle
29
          \langle level num="1" w="30" h="30" \rangle
30
           ⟨obj name="C-relay821"/⟩
 31
 32
          </level>
          (level num="2" w="40" h="50")
 33
           ⟨obj name="C-relay822"/⟩
 34
           ⟨obj name="atm-sw823"/⟩
 35
          ✓ level
 36
         </LOVD>
 37
```

```
\langle LOVD \text{ name}="netA-LOVD" x="25" y="50" \rangle
38
         (level num="1" w="10" h="10")
39
          ⟨obj name="netA831"/⟩
40
         </level>
41
         (level num="2" w="10" h="10")
42
          ⟨obj name="netA831"/⟩
43
         </level>
44
         (level num="3" w="10" h="10")
45
          ⟨obj name="netA834"/⟩
46
47
         </le>
       </LOVD>
48
       \langle LOVD \text{ name}="netB-LOVD" x="50" y="30" \rangle
49
         \(\text{level num="1" w="10" h="10"}\)
50
           ⟨obj name="netB841"/⟩
51
         </le>
⟨ / level⟩
52
         (level num="2" w="10" h="10")
53
           ⟨obj name="netB841"/⟩
54
          </level>
55
        </LOVD>
56
        \langle LOVD \text{ name}="netC-LOVD" x="60" y="60" \rangle
57
         \(\text{level num="1" w="10" h="10"}\)
58
           ⟨obj name="netC851"/⟩
59
          </level>
60
          (level num="2" w="10" h="10")
61
           ⟨obj name="netC851"/⟩
62
63
          </level>
        </LOVD>
64
        (init LOVD num="1"/)
65
```

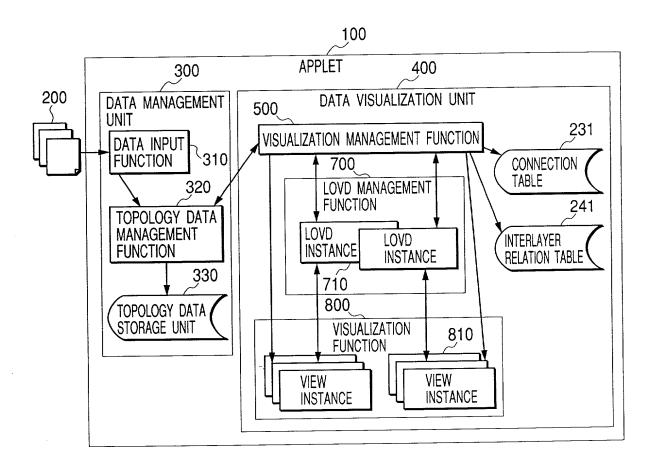
FIG. 14

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	<pre> ⟨connection name="A-relay801"⟩ ⟨obj name="netA831"/⟩ ⟨/connection⟩ ⟨connection name="A-relay801"/⟩ ⟨obj name="netB841"/⟩ ⟨connection name="B-relay811"/⟩ ⟨obj name="netA831"/⟩ ⟨connection name="B-relay811"⟩ ⟨obj name="netC851"/⟩ ⟨connection name="C-relay821"⟩ ⟨obj name="netB841"/⟩ ⟨connection name="C-relay821"⟩ ⟨obj name="netC851"/⟩ ⟨connection name="C-relay821"⟩ ⟨connection name="C-relay821"⟩ ⟨obj name="netC851"/⟩ ⟨connection⟩</pre>

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```
19
      (connection name="atm-sw803")
       ⟨obj name="netA831"/⟩
20
21
      </connection>
      ⟨connection name="atm-sw803"⟩
22
23
       (obj name="netB841"/)
24
       //connection>
25
      ⟨connection name="atm-sw813"⟩
       (obj name="netA831"/)
26
      </connection>
27
      ⟨connection name="atm-sw813"⟩
⟨obj name="netC851"/⟩
28
29
30
       </connection>
       ⟨connection name="atm-sw823"⟩
31
32
       ⟨obi name="netB841"/⟩
33
       </connection>
       (connection name="atm-sw823")
34
       (obj name="netC851"/)
35
       </connection>
36
       ⟨connection name="router804"⟩
37
       ⟨obj name="atm-sw803"/⟩
38
39
       ⟨/connection⟩
       (connection name="router814")
40
        ⟨obj name="atm-sw813"/⟩
41
42
       </connection>
       ⟨connection name="router804"⟩
43
        (obj name="netA834"/)
44
45
       (/connection)
       ⟨connection name="router814"⟩
46
        (obj name="netA834"/)
47
48
       </connection>
       ⟨connection name="A-relay805"/⟩
49
        (obj name="netB841"/)
50
51
       </connection>
```

```
1 (relation name="netA834")
2 (obj name="atm-sw803"/)
3 (obj name="netB841"/)
4 (obj name="atm-sw823"/)
5 (obj name="netC851"/)
6 (obj name="atm-sw813"/)
7 (/relation)
```



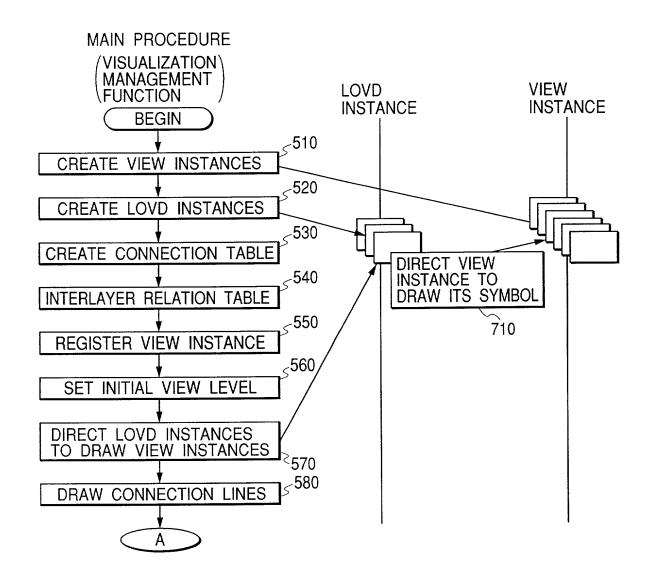


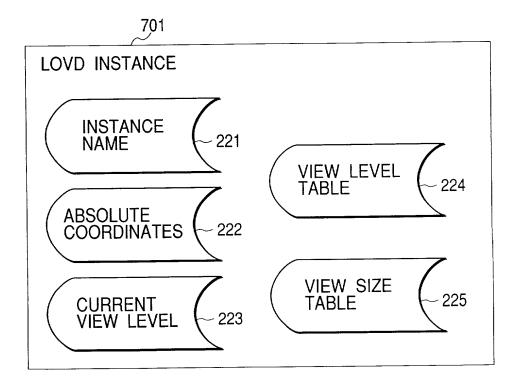
FIG. 18

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VIEW INSTANCE	VIEW INSTANCE	
A-relay801	netA831	
A-relay801	netB841	
B-relay811	netA831	
B-relay811	netC851	
C-relay821	netB841	
C-relay821	netC851	
atm-sw803	netA831	
atm-sw803	netB841	
atm-sw813	netA831	
atm-sw813	netC851	
atm-sw823	netB841	
atm-sw823	netC851	
router804	atm-sw803	
router814	atm-sw813	
A-relay805	netB841	
router804	netA834	
router814	netA834	

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PARENT INSTANCE	CHILD INSTANCE
netA834	atm-sw803
netA834	netB841
netA834	atm-sw823
netA834	netC851
netA834	atm-sw813



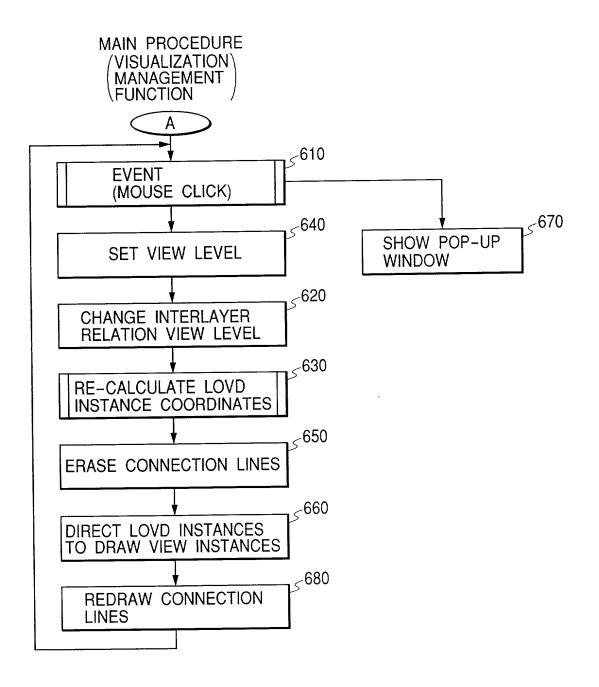
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VIEW LEVEL	VIEW INSTANCE	
1	A-relay801	
2 2	A-relay802 router804	
2 3	atm-sw803 A-relay805	
3	router804	

FIG. 22

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VIEW LEVEL	WIDTH	HEIGHT
1	30	30
2	100	100
3	60	50



AREA LAYER

PHYSICAL LAYER

IP LAYER

FIG. 25

LOVD INSTANCE COORDINATES RE-CALCULATION

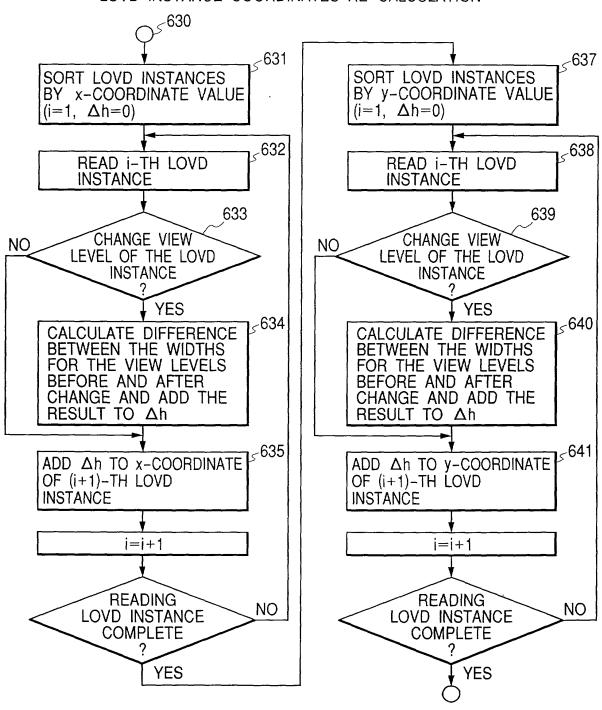


FIG. 26

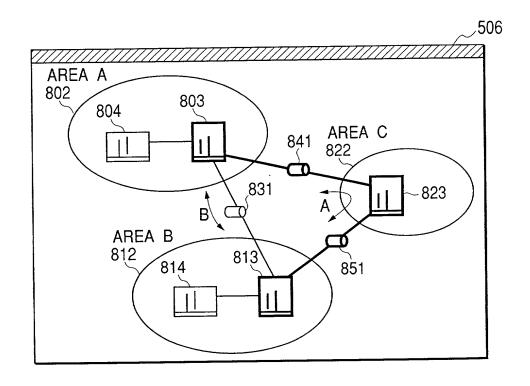
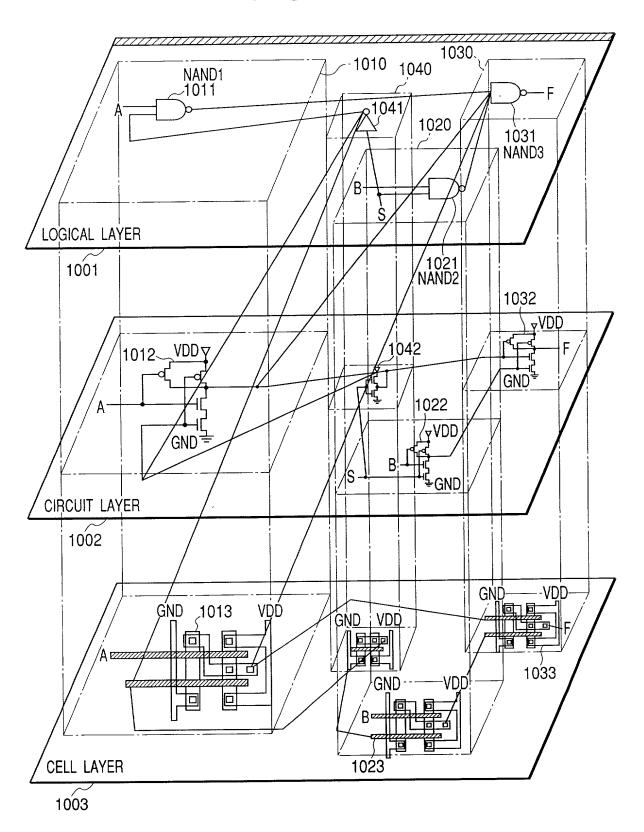
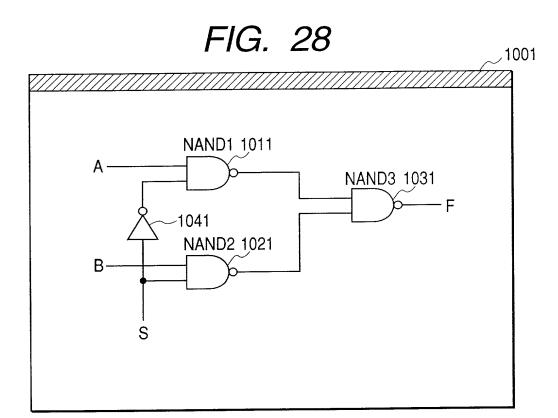


FIG. 27



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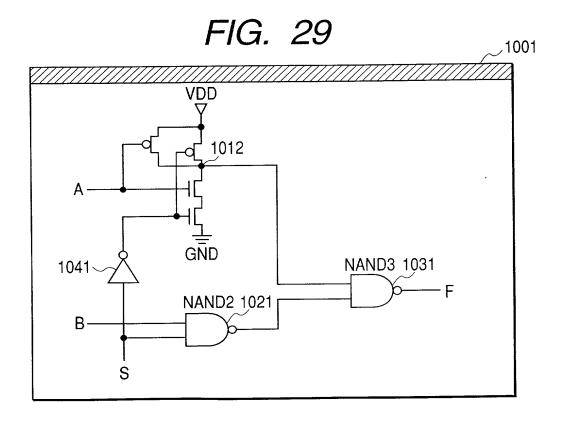


FIG. 30

